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21 APR 1977

MEMORANDUM FOR: NFIB Members  
FROM: Director of Central Intelligence  
SUBJECT: Soviet Civil Defense

I ask your indulgence in taking one more look at the proposed statement on Soviet Civil Defense. I have found it necessary to rework it some in order to give it enough teeth to make it worth publishing. I don't think the changes are substantial with respect to security, but I would most appreciate your double-checking me on this.

/s/ Stansfield Turner

STANSFIELD TURNER  
Admiral, U.S. Navy

Attachment

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20 April 1977

THE SOVIET CIVIL DEFENSE PROGRAM

This paper attempts to lay out the essentials of our knowledge about Soviet civil defense programs and to suggest criteria for judging Soviet activity in that field. A comprehensive assessment of program effectiveness cannot yet be made, but some qualitative assessments may help to keep the problem in perspective:

- ° The Soviets have an ambitious civil defense program. We have a good understanding of their overall doctrine and organization but lack important details about specific plans, programs, and objectives.
- ° The Soviets are taking some action with respect to all important aspects of civil defense. Evidence is lacking on their progress in many areas.
- ° The Soviets have not implemented all measures called for in their defense manuals.
- ° The Soviet program reflects an effort to improve the ability to survive a nuclear war with any adversary, and is much more than a "paper plan."

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The Soviets have been proceeding gradually but steadily in their civil defense effort. Significant shifts in emphasis occurred during the late 1960s and early 1970s when the entire civil defense program was subordinated to military direction. Efforts were increased to provide hardened command posts for the military/civilian leadership and the previous policy of mass evacuation of cities was modified by emphasizing hardened shelter construction within urban areas. Study of the Soviet civil defense effort has not revealed any major program changes since about 1971.

#### I. Circumstances

The adequacy of Soviet civil defense must be judged against a range of U.S. counterattack capabilities from the full strategic weapons inventory to the reduced number of weapons that would be expected to survive a Soviet first strike. In addition, the time which the Soviets have available to implement their civil defense, procedures can be a critical factor. This paper assumes a "worst case": that is, reduced U.S. retaliatory capability and at least a week for Soviet implementation of civil defense preparations, including urban evacuation.

The Soviet calculation of their own civil defense effectiveness would be much more conditional and would include such factors as whether the evacuation of cities, including the extensive associated preparations, would alert the U.S.

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## II. Criteria for Measuring Civil Defense Effectiveness

The danger in trying to assess the effectiveness of any program is in the tendency to isolate factors about which much is known, giving them undue importance, while ignoring lesser understood but equally important factors. No single factor can be taken as the prime indicator of effectiveness. In the case of Soviet civil defense, the following three basic criteria should be considered equally important; the weakness of any one potentially vitiating the effectiveness of the civil defense effort.

1. Ability to protect key government leaders.
2. Ability to protect the population.
  - evacuation
  - sheltering
  - sustenance
3. Ability to protect economic capacity for post-war recovery.
  - industrial facilities
  - essential industrial personnel
  - strategic reserves of critical materials

The following paragraphs describe our knowledge of Soviet capabilities in each of these areas.

## III. Protection of Leadership

Hardened urban shelters, alternate command posts, and supporting communications to protect military and civilian leaders have been identified in and near Moscow and at some capitals/military head-

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quarters below the national level. The program to build such shelters is far from complete, but it appears intended eventually to provide hardened shelters/communications for leaders at all levels.

- ° There are several hundred bunkered command posts in the USSR, not counting Strategic Rocket Forces control centers or numerous smaller bunkers for communications facilities. A number of these command posts are in the Moscow area but most are for military/civil organizations below the national level.

- ° Characteristically, such facilities include hardened bunkers adjacent to headquarters and hardened relocation sites, together with supporting communications systems, some with hardened antennas.

- ° While bunkers for the leadership vary somewhat in design and structure, they appear to be hard enough to survive a nuclear attack unless targeted with accurate high-yield weapons.

Evaluation: The existing civil defense measures probably would insure the survival of a large percentage of the military/civilian leaders needed to maintain government and party control.

#### IV. Protection of the Population

Since the late 1960s, more emphasis in policy statements and in construction programs has been given to urban shelters. This shift in emphasis is attributed to a concern that a nuclear exchange

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could occur with little prior warning. In shelter construction, first priority appears to be on hardened shelters for essential personnel. In most cities hardened shelters could accommodate only a small percentage of the nonessential population. Urban fallout shelters could probably provide some protection from radiation, however, the primary casualty-producing effects would probably be blast and fire rather than fallout radiation.

Therefore, heavy reliance is still placed on evacuation to protect the nonessential urban population. Given a period of warning prior to a nuclear attack, Soviet planning calls the nonessential urban population to evacuate to sites up to 300 km (186 mi) from likely urban target areas (farther away than the locations from which essential personnel would commute to the city). On the basis of 12 representative Soviet cities, movement of the nonessential population to evacuation sites and the improvisation of shelters for them could probably be completed within less than a week under the most favorable conditions. Evacuation could reduce immediate casualties to a few percent of the urban population. The degree of protection from radioactive fallout for large numbers of people at evacuation sites is uncertain.

Large stocks of essential supplies--food, water, fuel, and medicine--are located outside urban target areas, but we are unable to estimate with confidence how long such stocks would satisfy the needs of the population or how soon after the attack supplies could

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start to move from producers. There is no evidence that evacuation areas are being prestocked with essential supplies.

Following a nuclear attack on cities, preceded by a period of warning to make final preparations, supply levels could be sufficient to satisfy the minimum subsistence needs of the population for weeks and perhaps months. Distribution of supplies to the relocated urban population would probably be a more serious problem than stock levels.

Major portions of the Soviets' transportation equipment are normally located outside cities, and would probably not be destroyed by an attack on urban areas. If an attack were preceded by a period of warning, Soviet planning calls for the dispersal of transportation equipment from urban areas to predesignated sites outside cities. Nevertheless, important fixed transportation facilities/equipment in cities would be damaged and power for some segments of the electrified railroads would be disrupted. The most difficult problem for the Soviets would probably be to assure the survival of supply personnel, equipment, and communications, and to manage the complex distribution of supplies under chaotic conditions.

In the past several years, the emphasis in Soviet civil defense training, practices, and exercises has been on full-time and part-time personnel in civil defense staffs and organizations. The Soviets are relying primarily on educational programs to

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indoctrinate the general population. This is a realistic approach to developing an effective civil defense capability, according to U.S. civil defense experts.

Evaluation:

- ° With sufficient warning and favorable weather to permit effective evacuations, immediate casualties to the urban population could be reduced to a small percentage.

- ° Food and fuel stocks are widely distributed rather than concentrated in major urban centers. Most stocks have no special protection, but owing to the widespread locations of normal storage facilities, large quantities of grain especially could be expected to survive an attack.

- ° Identified special grain storage bunkers could provide for only about 3% of annual peacetime food-grain consumption and represent less than 1% of total grain storage capacity. The surviving population could be fed for at least weeks and probably months from existing stocks.

- ° The analysis of data on one major city indicates that a maximum of 7% of the urban population could be housed in blast shelters constructed for this purpose. This figure should not be taken as nationally representative, however, because evidence indicates the extent/pace of the shelter program are not uniform. This sort of estimate could



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easily be wrong by a factor of two either way (from half to double). A similar simplified extrapolation to future capability, based on very limited information about construction rates, indicates that the 7% could be roughly doubled in about ten years.

V. Protecting the Economy

Preparation to protect economic facilities is greater than previously realized. However, a complete assessment of the effects of these measures on the vulnerability of important economic facilities to nuclear attack is not yet complete.

Dispersal: Plans call for redistributing industries outside urban areas, taking advantage of industrial dispersal brought about by economic requirements. New towns have been created near raw material sources and industries have been established in many smaller cities in the course of expansion. Nevertheless, industrial expansion during the past 15 years into distant areas has not significantly reduced industrial vulnerability. Despite growth, heavy industry remains concentrated in large urban areas.

The vulnerability of industry has been reduced somewhat by resiting facilities within large urban centers and by the expansion of some industries into suburbs or "satellite towns." Some reduction in vulnerability has resulted from producing certain military equipment at more than one facility.

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Hardening: Plans also call for hardening measures. These range from underground facilities and protective engineering techniques to expedient measures to protect equipment. From a sample of numerous underground structures at a wide range of industrial facilities in various geographic areas, first priority appears to be in defense industries, but performance is uneven. Some underground structures were evident at other industries as well. The extent to which other hardening techniques are being applied is not clear. Some defense industries are required to have plans for relocation just prior to a nuclear attack, but the number/type of plants involved remains uncertain.

Evaluation:

- ° While light industry has been dispersed somewhat, heavy industry remains concentrated in large urban complexes.

- ° There is little evidence of extensive preparations to harden individual industrial facilities. The amount of effort required to protect industrial facilities could range from moderate (heavy machines such as lathes and milling equipment, for example, are relatively hard to disable) to extensive (chemical plants have a complex arrangement of interdependent equipment).

- ° Civil defense units trained to restore damaged industry exist at most facilities.

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- ° There is concentration on protecting essential workers in key industries rather than the population at large.

- ° Reserves of industrial materials are maintained and large quantities are normally in the production pipeline.

#### VI. Training for Civil Defense

Gradually increased emphasis has been given to civil defense training over the past five years. Some special training facilities have been constructed, and particular attention is being given to the training of civil defense leaders and units.

#### VII. The Soviet Perspective

In considering any actions which depend on civil defense protection, the Soviets would have to consider many uncertainties in its effectiveness, some of which are not under their control:

- ° Climate and weather could have a major influence on the ability of the population to evacuate, shelter, and sustain outside urban areas.

- ° The details of the U.S. counterattack would influence which leaders survived, which economic facilities were destroyed, and how much radioactive fallout was produced to cause post-attack fatalities.

° Distribution of food, medical care, industrial supplies, etc., would be at least as critical to recovery as the materials themselves.

VIII. Conclusion

The Soviets today do not possess a level of civil defense capability that would enable them to feel that they could absorb a retaliatory strike from the United States with a reasonable expectation of limiting damage to an acceptable level. The Soviet Union, however, is currently making a far more substantial effort in civil defense than the United States. In contrast to the Western world where emphasis is almost exclusively on the deterrence of nuclear warfare, Soviet leaders apparently feel that they must prepare for the possibility of nuclear warfare. This does not necessarily mean that they are planning to initiate such warfare, but that they appear to be thinking through its consequences should it occur and their need to plan for survival and post-attack recovery.

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